

Abstract

Method for measuring and compensating skews of data transmission lines connecting at least one data  
transmission device with a data reception device via a  
5 parallel data bus comprising for each data transmission  
line the following steps: measuring the relative time  
delay of the data transmission line by transmitting a  
determined sequence of measurement vectors (MV) each  
10 consisting of an alternating bit pattern via said data  
transmission line, wherein the bit alternation frequency  
is halved with every transmitted measurement vector (MV);  
comparing the received measurement vectors (MV')  
transmitted via said data transmission line with  
15 corresponding reference vectors (RV) stored in said data  
reception device; shifting the received measurement  
vectors by inserting data unit intervals (UI) until a  
received measurement vector (MV') matches a corresponding  
reference vector (RV); calculating a relative skew of the  
20 data transmission line depending of the number of  
inserted data unit intervals (UI) with respect to a  
slowest data transmission line; and compensating the  
calculated relative skew of the data transmission line by  
means of delay elements switched in response to the  
25 calculated relative skew.

Figure 7